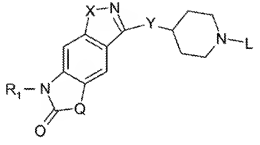
Claim Listing

Claims 1-5 (Cancelled)

Claim 6 (Currently Amended) A method for diagnosing, estimating the severity of, or monitoring the progression of disease in a human dementia ~~in a~~ patient, comprising:

(a) administering to the patient a detectable amount of a compound of a general formula I



I

or a pharmaceutically acceptable salt thereof, the compound comprising one or more radioisotopic atoms selected from the group consisting of carbon-11, fluorine-18, iodine-123, and bromine-76, wherein:

Q is $-(CH_2)_m$-, -CH=CH-, $-CHCH_3$-, $-C(CH_3)_2$, oxygen, sulfur, or $-NR^2$;

X is oxygen or sulfur;

Y is $-(CH_2)_n$-;

L is phenyl or $-(C_1-C_6)$alkyl-phenyl, wherein said phenyl is optionally substituted with one or more $-(C_1-C_6)$alkyl or halo groups;

R^1 is $-(C_1-C_6)$alkyl;

R^2 is hydrogen or $-(C_1-C_6)$alkyl; and

n and m are independent integers ranging from 1 to 3;

with a proviso that the compound is not that of formula II

II

(b) imaging the brain of the patient to generate a brain image showing a distribution and relative amounts of acetylcholinesterase in the brain; and

(c) relating the brain image of the human to the presence or absence or degree of severity of progression of said dementia[l].

Claim 7 (Original) The method of claim 6, wherein the dementia is Alzheimer's disease.

Claim 8 (Original)The method of claim 6, wherein the compound is administered intravenously.

Claim 9(Original)The method of claim 6, wherein the compound comprises a carbon-11 atom.

Claim 10 (Original)The method of claim 9, wherein R^1 comprises the carbon-11 atom.

Claim 11 (Original)The method of claim 6, wherein the imaging comprises performing PET or SPECT.

Claims 12-18 (Cancelled)